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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte KLAUS BIESTER

Appeal 2009-008608
Application 10/525,926
Technology Center 3700

Before: JENNIFER D. BAHR, LINDA E. HORNER, and STEFAN STAICOVICI, *Administrative Patent Judges*.

BAHR, *Administrative Patent Judge*.

DECISION ON APPEAL[1]

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[1] The two-month time period for filing an appeal or commencing a civil action, as recited in 37 C.F.R. § 1.304, or for filing a request for rehearing, as recited in 37 C.F.R. § 41.52, begins to run from the "MAIL DATE" (paper delivery mode) or the "NOTIFICATION DATE" (electronic delivery mode) shown on the PTOL-90A cover letter attached to this decision.

STATEMENT OF THE CASE

Appellant appeals under 35 U.S.C. § 134 from the rejection of claims 1-27. We have jurisdiction under 35 U.S.C. § 6(b). Claim 1, reproduced below, is illustrative of the claimed subject matter:

> 1. Regulating device for the linear regulation of an actuating element for operation of a blowout preventer comprising:
> a housing;
> a ball spindle drive within the housing comprising:
> a rotating spindle; and
> a ball nut surrounding the spindle; and
> a drive train comprising:
> at least one motor;
> a self-locking, double helical gear comprising at least one first helically-toothed gearwheel and at least one second helically-toothed gearwheel; and
> whereby the at least one motor is connected for movement with the at least one second helically-toothed gearwheel.

REFERENCES

The prior art relied upon by the Examiner in rejecting the claims on appeal is:

Howell	US 3,481,215	Dec. 2, 1969
Gilges	US 5,370,011	Dec. 6, 1994
Allen	US 5,722,304	Mar. 3, 1998
Coppola	US 5,743,348	Apr. 28, 1998
Waber	US 6,095,487	Aug. 1, 2000
McCormick	US 6,585,246	Jul. 1, 2003

REJECTIONS

Claims 1-7, 11, 13-15, 17-23, and 25-27 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over McCormick and Howell. Ans. 3-5.

Claim 8 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over McCormick, Howell, and Waber. Ans. 6.

Claims 9, 10, and 24 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over McCormick, Howell, and Allen. Ans. 7.

Claim 12 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over McCormick, Howell, and Coppola. Ans. 7.

Claim 16 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over McCormick, Howell, and Gilges. Ans. 8.

SUMMARY OF DECISION

We AFFIRM.

OPINION

Issues

Claim 1 is directed to a linear regulating device. The Examiner found that McCormick is directed to a linear regulating device as recited in claim 1, but without self-locking double helical gears. Ans. 3-4, 9. The Examiner then found that Howell teaches self-locking double helical gears, which can be used to "prevent overshoot of the output and to provide almost perfect damping characteristics" for a servomechanism. Ans. 3; Howell, col. 2, ll. 25-29. The Examiner concluded that it would have been obvious to incorporate the self-locking double helical gears of Howell into the linear regulating device of McCormick, in order to prevent overshoot and provide almost perfect damping characteristics, as well as to replace the existing brake in McCormick. Ans. 3, 9; McCormick, col. 3, ll. 1-6 (noting brake 37 is utilized when inertia or moment may cause a clamp to move, to prevent such drift).

Appellant argues that McCormick teaches away from the proposed modification (Appeal Br. 4-5); that the proposed modification would negate the benefits espoused in McCormick such as to be over-engineering (Appeal Br. 5); and finally that McCormick and Howell are not properly combinable references because they are non-analogous art (Appeal Br. 5-6). Appellant's arguments address claims 1-7, 11, 13-15, 17-23, and 25-27 as a group. Ans. 6. We select claim 1 as representative, with claims 2-7, 11, 13-15, 17-23, and 25-27 standing or falling with claim 1. 37 C.F.R. § 41.37(c)(1)(vii). In addition, Appellant argues the remaining rejections by incorporating the arguments with respect to claim 1. Appeal Br. 6. Accordingly, the following issues raised for claim 1 are dispositive of this appeal:

1. Are McCormick and Howell analogous art?
2. Has the Examiner properly considered the teachings of McCormick in making the proposed combination? In particular, does McCormick teach away from the proposed combination?

Issue 1 - Analogous Art

Two criteria have evolved for determining whether prior art is analogous: (1) whether the art is from the same field of endeavor, regardless of the problem addressed, and (2) if the reference is not within the field of the inventor's endeavor, whether the reference still is reasonably pertinent to the particular problem with which the inventor is involved. *In re Clay*, 966 F.2d 656, 658-59 (Fed. Cir. 1992). To determine what is "analogous prior art" for the purpose of analyzing the obviousness of the subject matter at issue, any need or problem known in the field of endeavor at the time of the invention and addressed by the patent or application at issue can provide a reason for combining the elements in the manner claimed. *KSR Int'l Co. v.*

Teleflex Inc., 550. U.S. 398, 420 (2007). Thus a reference in a field different from that of applicant's endeavor may be reasonably pertinent if it is one which, because of the matter with which it deals, logically would have commended itself to an inventor's attention in considering his or her invention as a whole. *In re ICON Health and Fitness, Inc.*, 496 F.3d 1374, 1379-80 (Fed. Cir. 2007).

Appellant alleges that the field of endeavor is "blowout preventer actuation." Appeal Br. 5. However, both the claims and the Specification make clear that the claimed invention is directed to regulators, and in particular, linear regulators. Cl. 1, preamble ("[r]egulating device for the linear regulation of an actuating element"); Spec. 1 ("[t]he invention relates to a regulating device for the linear regulation of an actuating element"). One particular intended use for Appellant's regulating device is as a blowout preventer, but the claimed regulating device is not limited to a blowout preventer. Spec. 2 ("the regulating device according to the invention is, as well as for use with BOPs [blowout preventers], also suitable for other devices with, in particular, a linear regulating actuating element."); cl. 1, preamble (phrase "for operation of a blowout preventer" merely states a purpose or intended use for the regulating device).

The Examiner found that McCormick describes a linear regulator. Ans. 9. Appellant does not challenge this finding. Appellant alleges that McCormick's regulator is designed "to only clamp small items, such as an electronic circuit board." Appeal Br. 4. We do not find any passage in McCormick that could be fairly said to support this allegation. Instead, we find that McCormick's linear regulator is intended for a wide range of uses and is not limited to circuit boards. *See generally* McCormick, col. 2, l. 23 to col. 3, l. 6 (noting various motors, clamps, or brakes may be used

depending on the size and mass of the object clamped). Thus, we find that McCormick's linear regulator is in the same field of endeavor as Appellant's claimed regulator. In addition, we find that McCormick's linear regulator is reasonably pertinent to the problem of providing actuating power in a small package. *See* McCormick, col. 1, ll. 31-33 ("[t]he present invention [is] an innovative design to produce an electric clamp with high clamping power in a small and relatively inexpensive package."). This problem is relevant to the present invention, which also seeks a compact design. *See* Spec. 2 ("a very compact design is obtained" by certain characteristics of claim 1), 4 (noting that "to make [the invention] more compact, drive shafts of the motors on both ends can run parallel to one another").

Appellant alleges that Howell is not analogous to the art of blowout preventer actuation, and thus is in a different field of endeavor and not reasonably pertinent to the problem of blowout preventer actuation. Appeal Br. 5-6. Howell teaches a self-locking double helical gear. Appellant's Specification discusses how self-locking gears are known to be useful for linear actuators intended to be used as blowout preventers. *See* Spec. 1. As such, we find that Howell's gear is reasonably pertinent to the problems relating to linear actuators, in particular to the problem of how to self-lock.

For the above reasons, we agree with the Examiner that both McCormick and Howell are analogous art.

Issue 2 - Combinability of McCormick and Howell

Appellant urges that McCormick and Howell are not combinable because the combination would be "unnecessary, redundant, and wasteful over-engineering" that would "negate the benefits of scalability specifically advocated by McCormick," thus teaching away from the proposed

combination. *See* Appeal Br. 4-5. However, none of these arguments, even if accurate, would demonstrate a teaching away. Teaching away requires a reference to actually criticize, discredit, or other discourage the claimed solution. *See In re Fulton*, 391 F.3d 1195, 1201 (Fed. Cir. 2004) (prior art does not teach away from claimed subject matter merely by disclosing a different solution to a similar problem unless the prior art also criticizes, discredits, or otherwise discourages the solution claimed). McCormick is silent as to the proposed solution of adding self-locking gears. In fact, McCormick teaches that drift can be a problem in some applications of the linear regulator such that a brake may be needed to alleviate the drift problem. Col. 3, ll. 1-6. That the Examiner's proposed combination may, in the Appellant's mind, be excessive in view of McCormick's described primary purpose does not mean that McCormick teaches away. As noted above, we find that McCormick's linear regulator is intended for a wide range of uses and is not limited to circuit boards, or to any particular scale of operation. "The use of patents as references is not limited to what the patentees describe as their own inventions or to the problems with which they are concerned. They are part of the literature of the art, relevant for all they contain." *In re Lemelson*, 397 F.2d 1006, 1009 (CCPA 1968). In fact, common sense teaches that familiar items may have obvious alternative uses. *KSR*, 550 U.S. at 420 ("Common sense teaches . . . that familiar items may have obvious uses beyond their primary purposes"). Further, if there are tradeoffs involved regarding features, costs, manufacturability, or the like, such do not necessarily prevent the proposed combination. *See Medichem, S.A. v. Rolabo, S.L.*, 437 F.3d 1157, 1165 (Fed. Cir. 2006) ("a given course of action often has simultaneous advantages and disadvantages, and this does not necessarily obviate motivation to combine."); *Winner Int'l*

Royalty Corp. v. Wang, 202 F.3d 1340, 1349 n.8 (Fed. Cir. 2000) ("The fact that the motivating benefit comes at the expense of another benefit, however, should not nullify its use as a basis to modify the disclosure of one reference with the teachings of another. Instead, the benefits, both lost and gained, should be weighed against one another.").

Rejections on obviousness grounds must be supported by "some articulated reasoning with some rational underpinning" to combine the known elements in the manner required in the claim at issue. *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006), *cited with approval in KSR*, 550 U.S. at 418. The Examiner's proposed combination is premised on an understanding that Howell's self-locking gears will provide the self-locking functionality to the regulator of McCormick, which would alleviate McCormick's concerns of drift. *See* Ans. 3-4, 9; *KSR*, 550 U.S. at 417 ("if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill."). Appellant has not provided a compelling explanation as to why the Examiner's reasoning lacks rational underpinning.

DECISION

For the above reasons, the Examiner's decision is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

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